

Genus	Vol. 10 (3): 371-379	Wrocław, 31 X 1999
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# Revision of the trigonopoid *Platynotina* from South Africa. Part VI. Genus *Claudegirardius* gen. nov. (*Coleoptera: Tenebrionidae: Platynotini*)

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ABSTRACT. Genus *Claudegirardius* gen. nov. of trigonopoid *Platynotina* from Cape Province (South Africa) and three species: *Claudegirardius bertiae* sp. nov. (type species), *C. costatus* sp. nov. and *C. queenstowniensis* sp. nov., are new to sciences. Key for species determination is provided.

Key words. entomology, taxonomy, revision, *Coleoptera*, *Tenebrionidae*, trigonopoid *Platynotina*, *Claudegirardius* gen. nov., new species, South Africa.

## INTRODUCTION

In his revisionary paper KOCH (1956) proposed the division of the tribe *Platynotini* into subtribes and generic groups. One of them is the trigonopoid *Platynotina* from South Africa. The group, besides the already known genera (*Bantodemus* KOCH, *Melanopterus* MULSANT et REY, *Trigonopus* MULSANT et REY and *Zophodes* FÄHRAEUS), included 5 genera newly described by KOCH (*Amblychirus*, *Atrocates*, *Eviropodus*, *Selinopodus* and *Schelodontes*).

The trigonopoid *Platynotina* group was proposed by KOCH (1956) on the basis of the structure of male fore tibia (strongly triangularly widened), the border of last abdominal ventrite and the structure of metasternum (very much shortened).

My interpretation of above mentioned genera and newly described (*Warchalowskiellus*, *Lawrenceus*, *Platycharlesus*, *Atrocrypticanus*) was presented in the papers of 1997, 1998 a, 1998 b, 1998 c, 1999, *Bantodemus* in preparation.

The present paper is the sixth of a series devoted to the revision of the trigonopoid *Platynotina* from South Africa. In total the group included 114 species in 13 genera.

#### ACKNOWLEDGEMENTS AND DEPOSITORIES OF THE MATERIAL EXAMINED

I am grateful to the following curators and institutions for the loan of specimens used in this study:

JFC - Julio FERRER Collection, Stockholm, Sweden (J. FERRER),

MNHN - Muséum National d'Histoire Naturelle, Paris, France (C. GIRARD),

TM - Transvaal Museum of Natural History, Pretoria, South Africa (S. ENDRÖDY-YOUNGA).

I wish to thank M. SZCZEPAŃSKA for her excellent habitus illustration.

The paper was partly sponsored by the State Committee for Scientific Research (Komitet Badań Naukowych, Warsaw, Poland), grant no. 6 P04C 074 12.

#### ABBREVIATIONS

pl/pb - pronotum length/breadth ratio;

el/eb - elytra length/breadth ratio;

el/pl - length ratio elytra/pronotum;

eb/pb - breadth ratio elytra/pronotum;

lbp - length of basal part of aedeagal tegmen;

lap - length of apical part of aedeagal tegmen;

ll - length of lacinia of tegmen (from suture of apical and basal parts to apex);

tl1 - total length of lacinia of tegmen;

c1/c2/c3/c4/c4-c3 - length ratios coxites1/coxites2/coxites3/coxites4/coxites4-coxites3;

bc1/lc1 - coxites1 breadth/length ratio;

lp/lc1 - length ratio paraproct/coxites1.

#### SYSTEMATICS

##### ***Claudegirardius* gen. nov.**

##### TYPE SPECIES

*Claudegirardius bertiae* sp. nov.; gender masculine.

##### NAME DERIVATION

In honour of Dr. Claude GIRARD from Muséum National d'Histoire Naturelle in Paris (France).

## DIAGNOSIS

*Claudegirardius* is closely related to *Eviropodus*, *Schelodontes* and *Zophodes* in the presence of the strongly convex anterior elytral margin and narrow fore tarsi in both sexes (except *Eviropodus*).

The structure of the mentum, elytral and pronotal puncturation places *Claudegirardius* close to *Zophodes*; it differs by male fore tibia (the outer margin with sharp apical denticle in *Zophodes*; as in figs 13 and 14 in *Claudegirardius*).

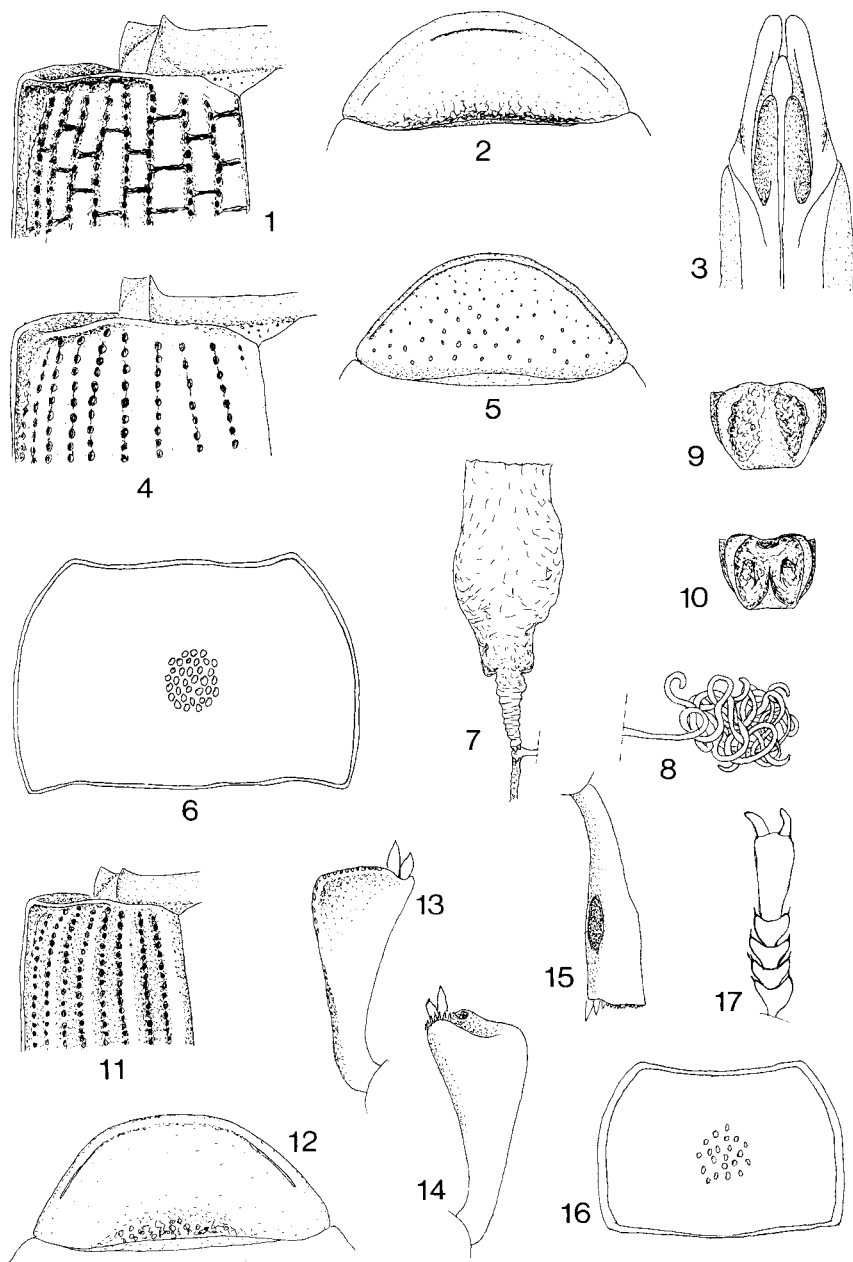
The unique structure of male hind tibia (the inner side with longitudinal concavity) and elytral epipleuron (upper ridge strongly convex apically) distinguishes *Claudegirardius* from the genera listed above.

## DESCRIPTION

Medium sized species (9.5-15.0 mm), body colour from dark brown to black, upperside mat, underside shiny. Head and pronotum coarsely and densely punctate; elytral intervals impunctate or punctures practically invisible, striae with large and round punctures. Underside of body finely and sparsely punctate; the middle part of prosternum and abdominal ventrites rugose. Elytra wider than pronotum. Head widest anterior to eyes, genal canthus wider than eyes. Frontoclypeal suture extremely weak, practically invisible. Antenna structure as in *Trigonopus*. Eyes narrowed laterally, 2-4 facets between gena and temple. Middle part of mentum rather wide, lateral margins (wings) very narrow. Pronotum with sides weakly rounded, nearly parallel on basal half; base nearly straight, slightly bisinuate emarginate; anterior angles rounded, posterior angles almost forming right-angle; border of basal margin entire. Scutellum located at level of humeral angles. Elytra with humeral angles slightly rounded, not protruding outwards; upper edge of anterior elytral margin arcuately convex (forms a ridge), with a border extending from humeral angle to scutellum; lower edge moderately convex; epipleura widened and shiny in their apical part (surface of elytron mat), upper edge strongly convex apically (well visible from upperside). Prosternal process produced towards mesosternum, with a border interrupted at apex. Border of last abdominal ventrite narrow, often interrupted. Fore tarsi in both sexes narrow, tibiae without spinules ventrally. Male legs, fore tibia widened apically, inner side simple; mid and hind tibia with two longitudinal ridges on outer margin; hind tibia widened apically, with longitudinal concavity on inner side. General structure of aedeagus and female reproductive system as in other trigonopoid *Platynotina*.

## DISTRIBUTION

South Africa (S-E Cape Province).



1, 10, 12-17. *Claudegirardius queenstowniensis*; 2-3, 11. *C. costatus*; 4-9. *C. bertiae*: 1, 4, 11 - anterior part of elytron; 2, 5, 12 - last abdominal ventrite; 3 - apical part of aedeagus; 6, 16 - pronotum; 7 - bursa copulatrix; 8 - spermatheca; 9, 10 - mentum; 13, 14 - ventral and dorsal view of male fore tibia; 15 - male hind tibia; 17 - male fore tarsus

## KEY FOR SPECIES DETERMINATION

1. Border of last abdominal ventrite entire (fig. 5); elytral striae punctate (fig. 4) ..... *bertiae*
- Border of last abdominal ventrite incomplete (figs 2, 12); elytral striae punctate-sulcate (figs 1, 11) ..... 2.
2. Elytral intervals 1, 3, 5 and 7 more strongly convex and shiny (fig. 11); border of last abdominal ventrite interrupted at apex (fig. 2) ..... *costatus*
- All elytral intervals flat and mat (fig. 1); border of last abdominal ventrite interrupted laterally (fig. 12) ..... *queenstowniensis*

***Claudegirardius bertiae* sp. nov.**

(figs 4-9, 18)

## LOCUS TYPICUS

Berlin (South Africa, Cape Province).

## NAME DERIVATION

Dedicated to Dr. Nicole BERTI from Muséum National d'Histoire Naturelle in Paris (France).

## DIAGNOSIS

*C. bertiae* is very closely related to *C. queenstowniensis* as indicated by the structure of elytra - all intervals flat, only 1, 3, 5 and 7 slightly widened.

The two species differ in the type of elytral striae puncturation (cf. fig. 4 and 1) and the disappearance of the border of the last abdominal ventrite (cf. fig. 5 and 12).

## DESCRIPTION

Body length 9.5 mm, pl/pb = 0.69, el/eb = 1.25, el/pl = 1.89, elytra wider than pronotum (eb/pb = 1.04). Eyes narrowed laterally, 2-3 facets between gena and temple. Antennal segment 3 ca. 2.3 x as long as segment 2. Mentum with anterior margin shallowly emarginate in the middle (fig. 9). Pronotum as in fig. 6; lateral border narrow (ca. 0.40 x width of antennal segment 3), with fine puncturation. Elytra moderately convex, slightly tucked in posteriorly (small part of interval IX visible from underside); upper edge of anterior margin delicately bordered (fig. 4); striae formed only by large and deep punctures; intervals flat, finely and sparsely punctate. Border of last abdominal ventrite narrow and entire (fig. 5). Ovipositor: lp/lc1 = 3.6, bc1/lc1 = 2.1, c1/c2/c3/c4/c4-c3 = 1.0/0.9/1.3/1.7/0.3; bursa copulatrix and spermateca as in figs 7 and 8.

## TYPE

Holotype (female), MNHN: "27.I. 1970. Berlin près East-London, Afrique Du Sud, Cl. BESNARD leg., Museum Paris Coll. P. ARDOIN".

## DISTRIBUTION (fig. 18)

South Africa (Cape Province: East London).

***Claudegirardius costatus* sp. nov.**

(figs 2-3, 11, 18, 19)

## LOCUS TYPICUS

Berlin (South Africa, Cape Province).

## NAME DERIVATION

Latin adjective, *costa*: rib.

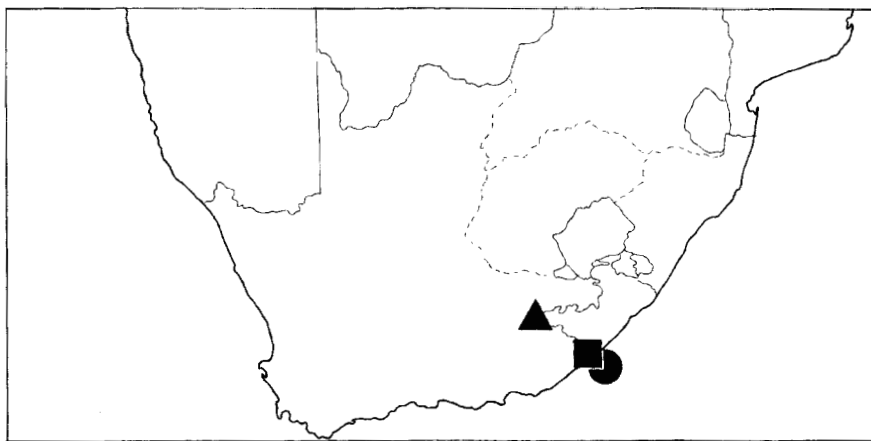
## DIAGNOSIS

*C. costatus*, like *C. queenstowniensis* has elytral striae punctate-sulcate and the border of the last abdominal ventrite incomplete.

The two species differ in the structure of elytral intervals (cf. fig. 1 and fig. 11) and the type of the disappearance of the border of the last abdominal ventrite (cf. fig. 2 and fig. 12).

## DESCRIPTION

Body length 9.5 mm (fig. 19),  $pl/pb = 0.70$ ,  $el/eb = 1.26$ ,  $el/pl = 1.94$ , elytra wider than pronotum ( $eb/pb = 1.08$ ). Eyes narrowed laterally, 3-4 facets between



18. Distribution of *Claudegirardius bertiae* (circle), *C. costatus* (square) and *C. queenstowniensis* (triangle)

gena and temple. Antennal segment 3 ca. 2.1 x as long as segment 2. Lateral border of pronotum narrow (ca. 0.30 x width of antennal segment 3), shiny, finely and sparsely punctate. Elytra moderately convex; upper edge of anterior margin distinctly bordered (fig. 1); striae punctured and grooved, i.e. punctate-sulcate; all elytral intervals are visible from underside; 1, 3, 5 and 7 more strongly convex and shiny. Border of last abdominal ventrite interrupted at apex (fig. 2). Aedeagus (fig. 3):  $lap/lbp/tll/l = 1.0/2.2/0.6/0.5$ .

## TYPES

Holotype (male), MNHN: "27.I. 1970. Berlin près East-London, Afrique Du Sud, Cl. BESNARD leg., Museum Paris Coll. P. ARDOIN". Paratypes: Hogsback, CP., 10-11.XII. 1956, V. SON & MARTIN, (TM) 1 m [without head]; Humus, I-1961; Z. A. 67, Beaufort Distr., Tidbury, N. LELEUP leg. (TM) 5 m, 3 f.

## DISTRIBUTION (fig. 18)

South Africa (Cape Province: East London, Beaufort).

***Claudegirardius queenstowniensis* sp. nov.**

(figs 1, 10, 12-17, 18)

## LOCUS TYPICUS

Queenstown (South Africa, Cape Province).

## NAME DERIVATION

The species is named after its locus typicus.

## DIAGNOSIS

Very similar to *C. costatus*, see diagnosis of this species for differences.

## DESCRIPTION

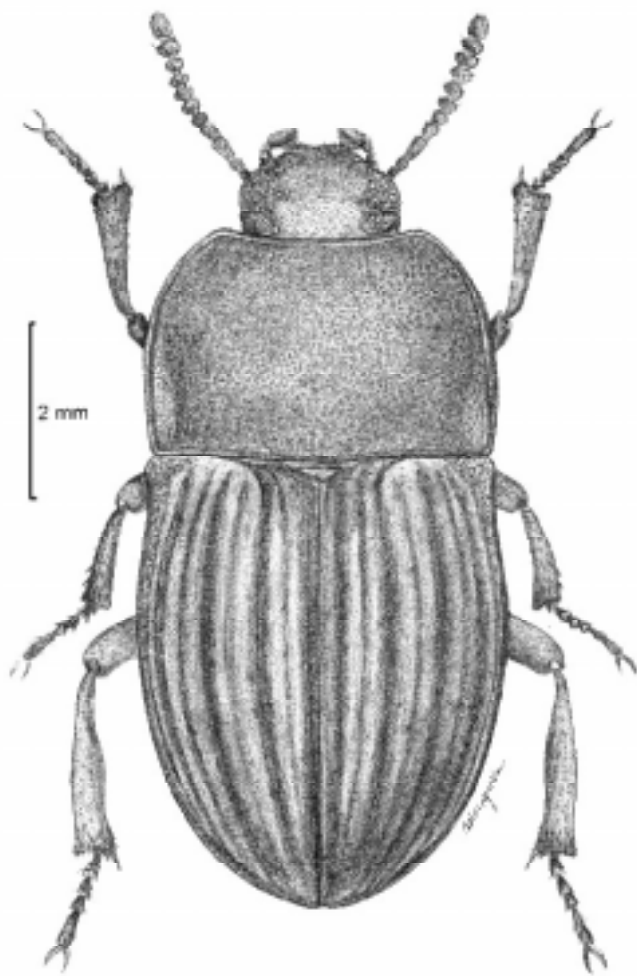
Body length 11.0 mm,  $pl/pb = 0.70$ ,  $el/eb = 1.19$ ,  $el/pl = 1.82$ , elytra wider than pronotum ( $eb/pb = 1.07$ ). Eyes narrowed laterally, 3-4 facets between gena and temple. Antennal segment 3 ca. 2.0 x as long as segment 2. Mentum with anterior margin deeply emarginate in the middle (fig. 10). Pronotum as in fig. 16; lateral border narrow (ca. 0.50 x width of antennal segment 3), shiny, finely and sparsely punctate. Elytra moderately convex, slightly tucked in posteriorly (small part of interval IX visible from underside); upper edge of anterior margin distinctly bordered (fig. 11); striae punctate-sulcate, formed by large and deep punctures; intervals flat and impunctate, with transverse impressions. Border of last abdominal ventrite interrupted laterally (fig. 12). Male legs, fore tarsi narrow (fig. 17); fore tibia widened apically (figs 13 and 14), hind tibia with longitudinal concavity on inner side (fig. 15). Aedeagus  $lap/lbp/tll/l = 1.0/2.4/0.6/0.4$ .

## TYPE

Holotype (male), JFC: "Mus. Roy. Afr. Centr. Queenstown (Cape) IX.1965, Dr. V. ALLARD, *Zophodes tristis* Fahr. det. Julio FERRER 1995".

## DISTRIBUTION (fig. 18)

South Africa (Cape Province: Queenstown).



19. *Claudegirardius costatus*, male (by M. SZCZEPAŃSKA)



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